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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/891,580	06/26/2001	Toshimitsu Taniguchi	10417-085001	3310

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CHRIS T. MIZUMOTO
Fish & Richardson P.C.
45 Rockefeller Plaza, Suite 2800
New York, NY 10111

EXAMINER

ANYA, IGWE U

ART UNIT

PAPER NUMBER

2825

DATE MAILED: 08/06/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/891,580

Applicant(s)

TANIGUCHI ET AL.

Examiner

Igwe U. Anya

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 June 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☒ Claim(s) 11 and 12 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 June 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Specification

1. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or
(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

3. Claims 1, 2, 4, and 5 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Shimizu (US Patent Number 6380020).
4. Shimizu teaches claimed invention. (see figs. 2A – 2F, column 5 line 66 – column 6 line 9).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 3 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shimizu (US Patent Number 6380020) in view of Nakata (US Patent Number 525489).

7. Shimizu teaches the features previously outlined, but lacks the steps wherein the first and second oxides are formed by thermal oxidation, and the surface of the semiconductor is not exposed when a photoresist film is used as a mask.

8. However, Nakata teaches a method wherein the first and second oxides are formed by thermal oxidation (column 2 lines 38 – 68), and the surface of the semiconductor is not exposed when a photoresist film is used as a mask (fig. 4B).

9. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Shimizu into the method of Nakata to fabricate transistors with different gate oxide thickness. It is within the general skill of a worker in the art to select a known method on the basis of its suitability for the intended use.

10. Claims 7 to 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shimizu (US Patent Number 6380020) in view of Ishigaki (US Patent Number 6404024).

11. Shimizu teaches the features previously outlined, but lacks the steps of:
a substrate of first conductivity type;

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a well on the upper surface of the substrate;
an LDD/HDD source/drain of second conductivity type; and
forming a channel region between the source and drain.

12. However, Ishigaki teaches in fig. 10 a semiconductor device, comprising:

a substrate of first conductivity type (24);
a well on the upper surface of the substrate (26);
a high voltage MOS transistor on the thicker oxide film (38);
a normal voltage MOS transistor on the thinner oxide film (30); and
an LDD/HDD of second conductivity type with a channel region formed between
the source and drain (64, 68).

13. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Shimizu into the method of Ishigaki to fabricate transistors of different gate oxide thickness on a conductive substrate. Provision of adjustability, where needed involves only routine skill in the art.

14. Claims 11 and 12 are objected to as being dependent upon a rejected claim, but would be allowable if rewritten in independent form.

15. Prior art considered but not used in the rejections include Beasom (US Patent Number 5650658) and Hayakawa et al. (US Patent Number 5766996).

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Igwe U. Anya whose telephone number is (703) 308-3549. The examiner can normally be reached on M - F 8:30am - 5:00pm.


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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew S. Smith can be reached on (703) 308-1323. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9318 for regular communications and (703) 872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Igwe U. Anya
Examiner
Art Unit 2825

IA
August 3, 2002

A handwritten signature in black ink, appearing to read 'Matthew Smith', with a stylized, cursive script.

MATTHEW SMITH
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800